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derived under these promising circumstances, an orbit fairly approximating to the true one (or to that which we have strongest reason to rely upon) might be expected as the result of their discussion; but I confess I had no idea that this series of measures (leaving untouched, as it does, the more distant part of the apparent ellipse when observations are made with comparative facility and proportionally greater accuracy), would produce a set of elements bearing such close resemblance to those of Sir John Herschel, which having been calculated upon the whole course of observations, on a method possessing peculiar recommendations, we may fairly presume to be the most exact system at present in the hands of astronomers. For the sake of immediate comparison the two orbits are subjoined together:

Elements of γ Virginis.

	I. From the Observations of Capt. W. H. Smyth.	II. Sir John Herschel's last Elements.
Perihelion Passage	1836·40	1836·39
Position at Perihelion	323° 50′	322° 12′
Ascending Node	20 34	28 42
Inclination to Plane of Projection	27 23	30 39
Angle between the Lines of Apsides and Nodes upon the Orbit	300 13	290 30
Excentricity	0·8804	0·8860
Period of Revolution	$171^{\mathrm{yrs}}{\cdot}54$	$183^{\mathrm{yrs}}{\cdot}14$

Motion in the Orbit — *retrograde.*

"In comparing these orbits, it must be borne in mind that in the present case an alteration in the position of the node of 10° has but very little influence upon the computed angles of position; and for this reason the node and the angle between the lines of nodes and apsides cannot be exactly ascertained. The agreement between the other elements is, I think, very remarkable; and as regards the period, the observations of Capt. Smyth furnish us with the time of revolution of the companion-sun round the other, differing less than *twelve* years from that which, under existing circumstances, may be regarded as the true one."

The Rev. Alfred Weld, director of the observatory at Stonyhurst College, has sent the details of his observations to determine the place of Weisse, 11^{h}, 929. The individual results are very fairly consistent.

Mean place Jan 1, 1850.

Weisse, 11, 929 R.A. $2^{h}\ 52^{m}\ 36^{s}{\cdot}38$ 6 obs. Dec. $-10^{\circ}\ 16'\ 20''{\cdot}8$ 5 obs.

In reference to Mr. John Riddle's solution of the problem for clearing the moon's distance (vol. xi. p. 63, &c.), Mr. Drach re-

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marks that it does not materially differ from a method given by Lieut. Raper, *Practice of Navigation*, third edition, p. 286, &c., where the traverse table is used for computing the corrections.

Mr. J. W. Jeans, F.R.A.S., of Grantham, suggests that the appearances seen by Mr. Read on the 4th of last September (p. 48) probably arise from some disorder of the digestive organs. Mr. Jeans has himself seen similar appearances while observing *Venus* by daylight, and with the eye fatigued; they vanished when the eye was rested. Something similar has presented itself pretty frequently to other observers, and is generally attributed to a disordered action of the optic nerve arising from indigestion or from over-work.

Mr. Thomas Hedgcock, Master in the Royal Navy, sent a Hadley's quadrant with some modifications, which were described in an accompanying memoir. The Editor is not able to comprehend the proposed improvement, as Mr. Hedgcock has not pointed out with sufficient clearness that defect in the usual construction which he has intended to remedy. A small level is attached to the frame of the sextant to serve when the sea horizon is not distinct, but this is not a novelty.

ERRATA.

Vol. xi. p. 64, 12 lines from the top. *for* altitudes, *read* altitude.
65, 3 lines from the bottom. *for* 0·137, *read* 1·137.
—, last line, *for* 0·720, *read* 1·720.

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